



**STATE OF NEW JERSEY**

**Board of Public Utilities  
Two Gateway Center  
Newark, NJ 07102  
www.bpu.state.nj.us**

IN THE MATTER OF THE BOARD'S	)	<u>RELIABILITY &amp; SECURITY</u>
INVESTIGATION INTO JCP&L's	)	
EMERGENCY MANAGEMENT OF THE	)	and
SEASIDE HEIGHTS/TOM'S RIVER	)	
JULY 5-8, 2003 EVENT	)	<u>CUSTOMER ASSISTANCE</u>
	)	
	)	ORDER ADOPTING
	)	STAFF'S FINAL REPORT AND
	)	MEMORANDUM OF
	)	UNDERSTANDING

Docket No. EO04050373

(SERVICE LIST ATTACHED)

**BY THE BOARD:**

The Board of Public Utilities ("Board"), an agency within a principal department of the Executive Branch of the State Government, is empowered to ensure that regulated public utilities provide safe, adequate and proper service to the citizens of New Jersey (N.J.S.A. 48:2-23). Jersey Central Power and Light (JCP&L or the Company) is an electric company subject to jurisdiction of the Board.

On July 5, 2003, a fault occurred on a JCP&L sub-transmission line, which was the first of a series of equipment failures and power outages that lasted 63 hours of intermittent duration from July 5 until Monday July 7, 2003. The outages occurred along the Jersey shore towns of Seaside Heights, Seaside Park, Mantoloking, Ocean Beach, Ortley Beach and Lavalette, at the peak of the tourism season in towns that frequently depend on tourism for their economic vitality. Additionally, the community impact extended beyond these towns.

It is estimated that at peak, the outages caused 40,000 customers to be without electric service, with at least 5,000 customers out of electric service for over six hours. These events prompted the Board to investigate the cause of the outages and JCP&L's response. President of the Board Jeanne Fox directed Division of Reliability and Security Staff to conduct an investigation of JCP&L's communication and restoration actions taken during the July 5<sup>th</sup> outages. The investigation resulted in the Staff's Report On the Emergency Management Aspects of the Seaside Heights Tom's River July 5-8 Event, dated May 26, 2004 (the "Report"), a copy of which is attached hereto. The

Report identified concerns with JCP&L's response to the outages and the overall reliability of the Company's communication with Board staff during emergency management situations. An investigation of JCP&L resulted in Staff and JCP&L entering into a Memorandum of Understanding, ("MOU") a copy of which is attached hereto.

Generally, the Report and MOU set forth recommendations that seek to improve the performance and restoration of service during outages and to improve communication with Board staff in accordance with the company's regulatory obligations. More specifically, the Report and MOU provide that 1) JCP&L will establish a position with full and complete responsibility to handle the Company's emergency operations; 2) lower the reporting thresholds company-wide to allow Board Staff to react more quickly to any potential wide-spread outages; 3) further lower the reporting threshold for areas affected by the prior July 5-8, 2003 outages; and 4) improve and implement continuous training for JCP&L personnel.

The Board recognizes that the goal is improved consequence and emergency management, and improved communication. These recommendations are designed to promote prompt emergency communications and to reinforce emergency communication protocols. This, in turn, will enable Board Staff to respond in ways that can minimize the impact and severity of such outages in the event such outages occur.

Accordingly, the Board HEREBY ADOPTS the Staff's Report. The Board also HEREBY APPROVES the MOU attached hereto as its own, incorporating by reference the terms and conditions as if fully set forth herein. The Board HEREBY ORDERS JCP&L to comply with all the requirements and recommendations contained in the MOU.

DATED: **6/16/04**

BOARD OF PUBLIC UTILITIES  
BY:

***SIGNED***

\_\_\_\_\_  
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PRESIDENT

***SIGNED***

\_\_\_\_\_  
FREDERICK F. BUTLER  
COMMISSIONER

***SIGNED***

\_\_\_\_\_  
CAROL J. MURPHY  
COMMISSIONER

***SIGNED***

\_\_\_\_\_  
CONNIE O. HUGHES  
COMMISSIONER

***SIGNED***

\_\_\_\_\_  
JACK ALTER  
COMMISSIONER

ATTEST:

***SIGNED***

\_\_\_\_\_  
KRISTI IZZO  
SECRETARY

IN THE MATTER OF THE BOARD'S  
INVESTIGATION INTO JERSEY CENTRAL  
POWER & LIGHT'S EMERGENCY MANAGEMENT OF  
THE SEASIDE HEIGHTS/TOM'S RIVER JULY 5-8, 2003 EVENT  
DOCKET NO. EO04050373

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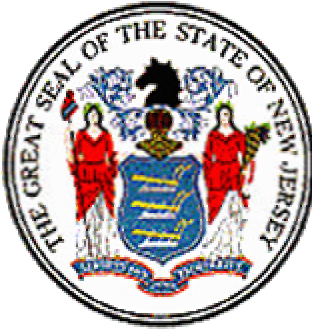
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**STATE OF NEW JERSEY**

**BOARD OF PUBLIC UTILITIES**

**Docket No. EO04050373 - In the Matter of the Board's  
Investigation Into Jersey Central Power & Light's Emergency  
Management Of the Seaside Heights/Tom's River July 5-8,  
2003 Event**

**June 1, 2004**

**REPORT ON EMERGENCY MANAGEMENT ASPECTS OF THE**  
**SEASIDE HEIGHTS/TOMS RIVER**  
**JULY 5-8, 2003 EVENT**

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# **REPORT ON THE EMERGENCY MANAGEMENT ASPECTS OF THE SEASIDE HEIGHTS/TOMS RIVER JULY 5-8, 2003 EVENT**

## **Executive Summary**

This report explores a series of power failures that affected Seaside Heights and surrounding communities during last year's July 4<sup>th</sup> weekend.

On Saturday July 5, 2003, at 12:50 P.M., a fault occurred on a JCP&L transmission line providing electricity to the towns of Seaside Heights, Seaside Park, Mantoloking, Ocean Beach, Ortley Beach and Lavallette. This initial fault led to a series of equipment failures that lasted 63 hours intermittently, into Tuesday, July 8, 2003. Area outages were of varying durations, affecting over 34,000 customers at peak with the longest interruptions occurring on Saturday and Sunday nights. The most significant impact was that these outages affected an area critical to New Jersey's tourism industry on the peak tourism weekend of the year. Boardwalk rides, hotels/motels, shops, restaurants and other commercial establishments were all operating at peak capacity with usually high volumes of traffic. For the Jersey Shore, the timing of the outages could not have been worse.

The power outages also caused approximately 5,900 Verizon wireline customer telephone service interruptions. There were reports of loss of cellular telephone service to Verizon Wireless customers as well. However, as previously stated, the major impact to community functioning was the loss of electric power, and therefore all related services, effectively shutting down this vital shore community during its most important revenue season.

New Jersey Board of Public Utilities (Board) President Jeanne Fox directed the Division of Reliability and Security Staff (Division Staff) to conduct an investigation of JCP&L's communication and restoration actions taken during and after the July 5th outages. As an element of that investigation, Division Staff probed the emergency management aspects of the event. The Division's emphasis on the emergency management aspects is to identify action items and recommendations which will minimize an outages' impact on community functioning.

The underlying reliability and root cause equipment failure issues of the electric system are addressed in the report produced by the Board's Special Reliability Master, PJ Downes Associates, LLC.

## **Conclusions**

The interdependencies associated with the electric power system are numerous and far reaching. Large and extended power outages can severely impede overall community functioning. Traditionally, electric utilities have focused their efforts on the company's main historical mission: to restore power in the most expedient manner possible. That paradigm must be shifted to reflect the fact that an electric power outage is more than a utility event; it is also a community event complete with communication responsibilities and emergency management obligations for the electric utility. Safe and prompt restoration remains a primary utility mission, but as part of Division Staff's analysis of the events of July 5-8, Staff has reviewed JCP&L's restoration process,

isolated its key elements, and developed recommendations to improve the emergency communications structure, shorten outage reporting thresholds, and adjust processes and methodologies that the Company uses with respect to communications and emergency management.

After a comprehensive investigation which included discovery, meetings with emergency management officials, a Tabletop exercise and other investigative efforts, Division Staff has concluded that JCP&L lacked an appropriate structure in executing its emergency communications and emergency management obligations. The shortcomings in the Company's communications also impacted the Board's ability to meet its emergency management obligations in an effective manner. We note that JCP&L has taken steps to initiate protocols to reinforce and strengthen its emergency communications chain from its origination point outward to its ultimate destinations.

Division Staff has also concluded that Verizon failed to provide appropriate service, because it did not provide backup generation to telephone equipment that is reliant upon commercial power.

## **Recommendations**

Division Staff has identified an action plan that we believe will improve JCP&L's execution of its emergency communications and related emergency management obligations. The utility has mapped these findings to steps it has initiated and continues to take in order to improve its emergency communications and situational assessment capabilities. In the Memorandum of Understanding (MOU), the company has agreed to:

- ? Establish a position to handle the company's emergency management obligations;
- ? Lower the outage reporting threshold company-wide to allow Board Staff to react faster to any potential widespread outages;
- ? Significantly tighten the reporting threshold for the area affected by last July's outages in order to prevent a repeat of the communications problems that occurred last year; and
- ? Outline continuous training for JCP&L personnel.

The full text of these recommendations can be found on Pages 8 and 9.

In summary, these recommendations are designed to promote prompt emergency communications, institute a more defined framework within JCP&L for responding to emergencies, and reinforce emergency communications protocols.

Division Staff has developed a recommendation with regard to Verizon that seeks to establish a Best Practice that will have landline phone companies install electric power monitoring devices on key field equipment, respond promptly to any outage and increase the battery back-up capability of key field equipment. The full text of this recommendation can be found on Page 11.

Division Staff has developed a recommendation with regard to the Wireless Industry that seeks to establish a Best Practice that will equip each cell tower with battery back-up and electrical connections for a portable generator. Full text of this recommendation can be found on Page 11.



# **REPORT ON THE EMERGENCY MANAGEMENT ASPECTS OF THE SEASIDE HEIGHTS/TOMS RIVER JULY 5-8, 2003 EVENT**

## **I. Introduction**

### **A. Description of the Event**

JCP&L's New Jersey service territory is divided into two distinct areas: the Northern and Central Regions. This report deals with the Central Region's service territory which covers, in part, the communities of Seaside Heights, Seaside Park, Mantoloking, Ocean Beach, Ortley Beach and Lavallette in Ocean County. (A map of the subject area is shown in Figure 1.) These areas are served by Company-owned substations, where power is supplied from three sub-transmission circuits designated the aerial "C-203," the submarine "X-50" and the submarine "V-126." The electrical distribution system design was planned such that two of these transmission lines would be able to supply the peak load for the area, while one would remain as a spare.

On June 29, 2003, there was a cable fault on an underground portion of the submarine X-50 cable transmission line near the Seaside Heights substation. Repairs were undertaken and completed before July 5, 2003; however, the cable was not loaded to full operating capacity or placed into service. The cable was apparently being kept as a spare; however, any related load management issue as to whether this line should have been called into service is outlined further in the report produced by the Board's Special Reliability Master, PJ Downes Associates, LLC.

On Saturday July 5, 2003, at 12:50 p.m., a fault occurred on the submarine V-126 transmission line, leaving only one tested transmission line circuit, the aerial C-203 circuit, to supply power to the entire area. Eventually, this remaining circuit also faulted.

The fault of the V-126 transmission line was the first in a series of cascading line equipment faults that resulted in electric service interruptions which lasted 63 hours intermittently, into Tuesday, July 8, 2003. Area outages were of varying durations, affecting over 34,000 customers at peak, with the longest interruptions occurring on Saturday and Sunday nights. (Figure 2 shows the timeline of equipment problems, while Figure 3 shows the number of customers affected during the period.)

While the number of JCP&L's customer service outages was reported at 34,000, it is important to view the larger impact of this event from the scope of the massive influx of tourists at the time. The Boardwalk was crowded; the restaurants full, the children were at play on amusement park rides. All power dependent activities came to an abrupt stop: traffic lights, refrigerators, air conditioning, etc.

Due to the power outages, approximately 5,900 Verizon wireline customers experienced telephone service interruptions. There were also reports of loss of cellular telephone service from Verizon Wireless customers.

The following report focuses mainly on the emergency management and communication issues related to what turned out to be a major impact event on a high density population area. The root cause design, equipment and technical operation issues that led to the outage, extended its duration, and broadened its impact are addressed in the separate report produced by the Board's Special Reliability Master, PJ Downes Associates, LLC.

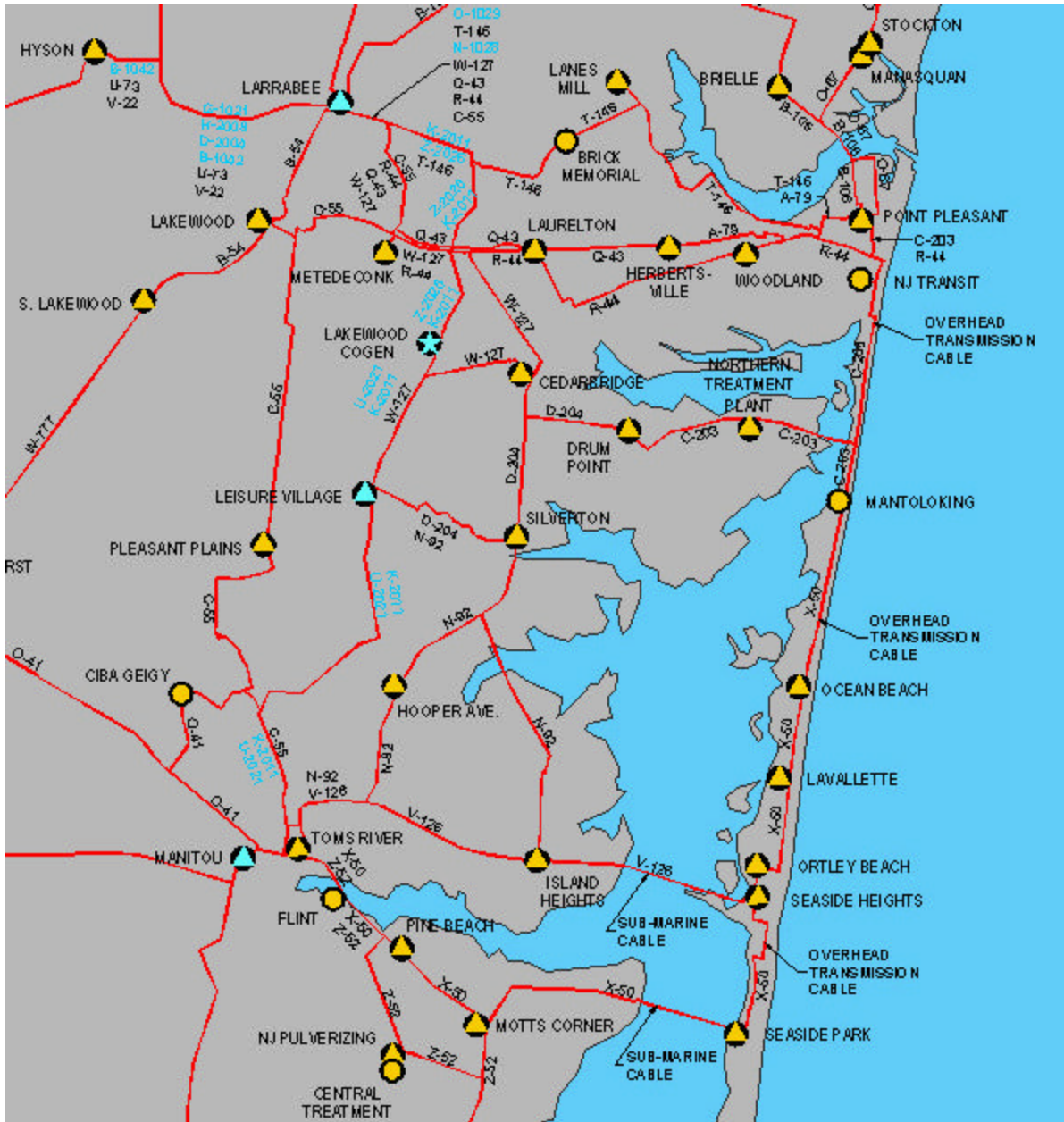


Figure 1

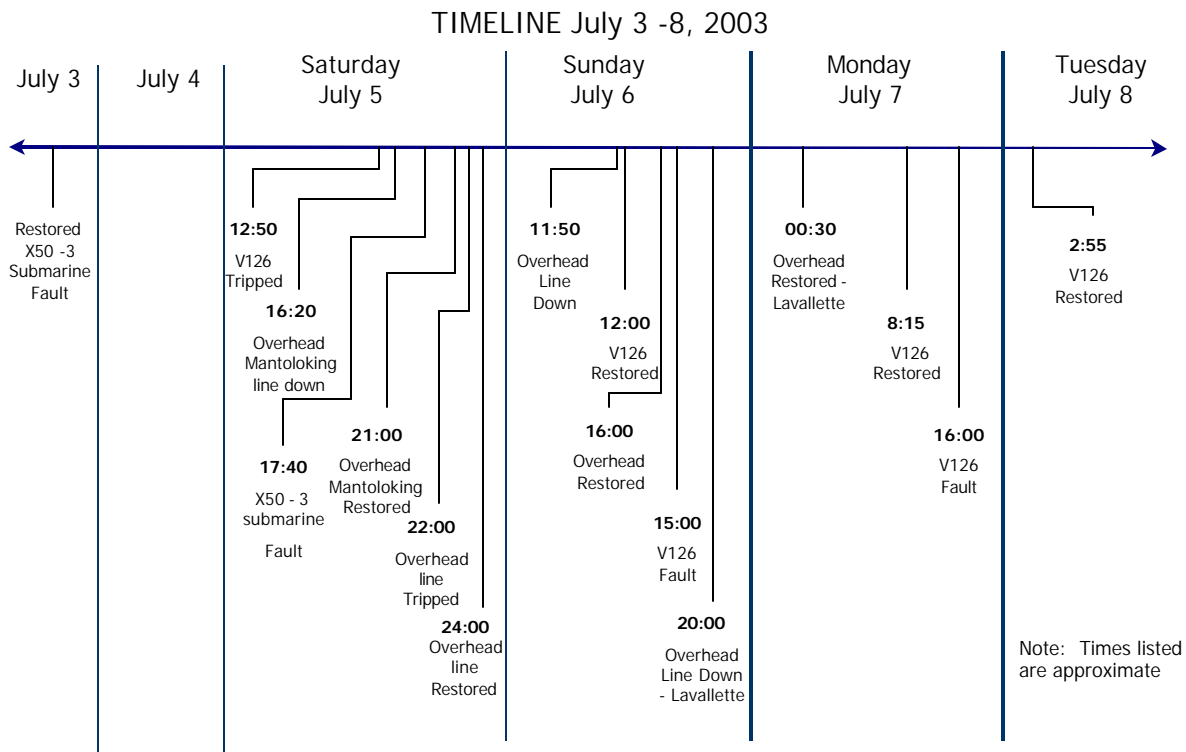


Figure 2

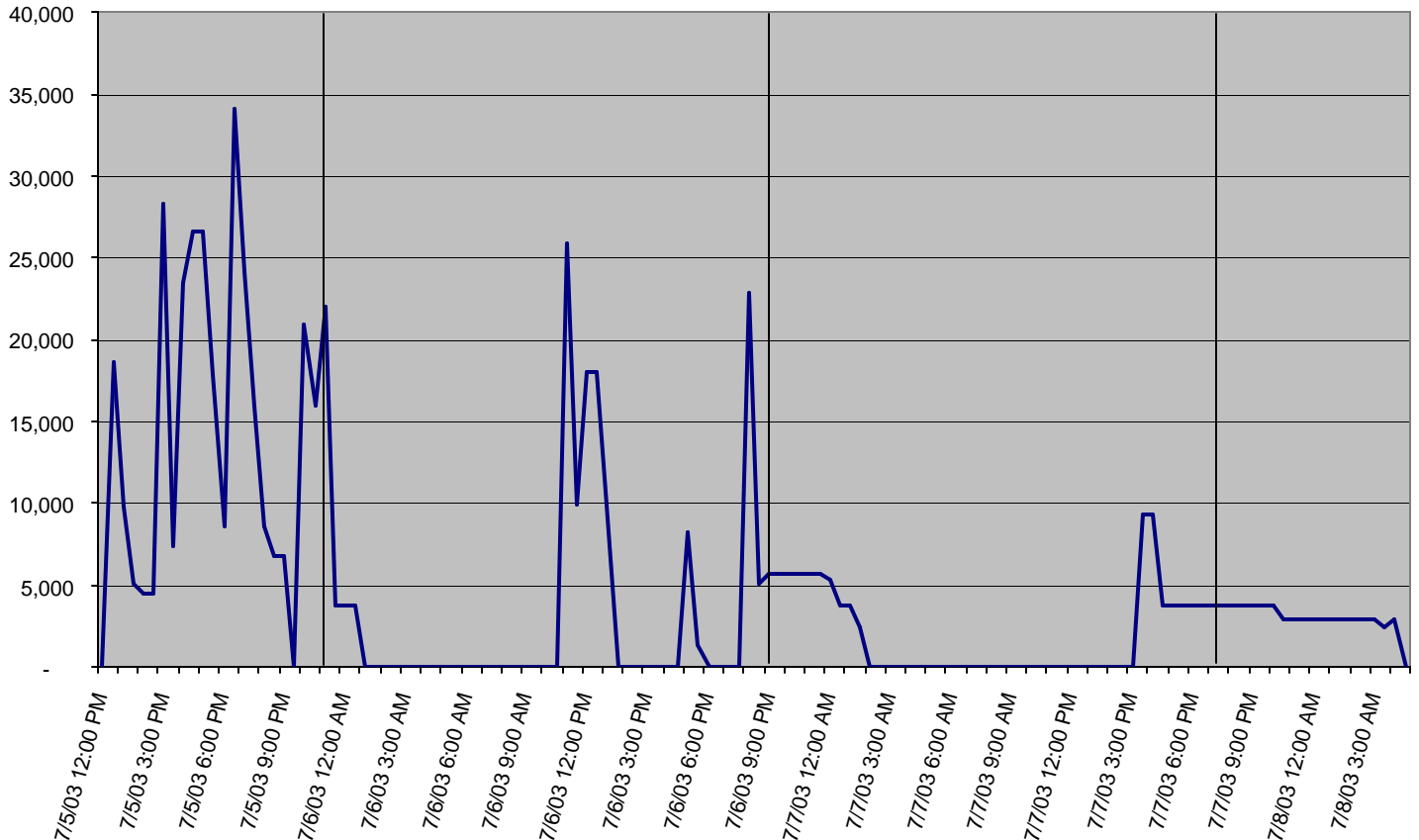
## B. Overall Response and Restoration

Throughout the July outage event, there were shortcomings in JCP&L's emergency management communications with Division Staff. JCP&L not only failed to meet the regulatory mandated responsibility of reporting and updating the ongoing events to Board Staff in a timely manner, the Company also failed to meet the Board's commonly known utility reporting expectations and protocols during major outage events. Electrical outages are not just a utility event, they affect the whole community. Beyond the obvious public safety concerns such as fire, police, traffic control, etc., there are issues of security alarms, critical care customers, seniors, economic viability, sustenance, medical maintenance and a whole variety of interdependencies that surface when there is a power outage.

On this particular high volume weekend, the impact on vacationers, business owners and residents was profound and pervasive. Holiday traffic along the Barrier Island and areas feeding into it was immediately snarled. Public safety officials were forced to draft all available personnel for traffic control as they attempted to alleviate the massive gridlock, leaving communities at further risk by understaffing other public safety operations. JCP&L did not make timely assessments about the outage extent and potential duration; therefore, it could not communicate the order of magnitude of the outage's impact on community functioning, even if it *had* communicated fluidly and robustly.

From the very start, and throughout the entire event, JCP&L failed to execute appropriate emergency communications. The Company did not contact Board Staff to report the initial outages. JCP&L also failed to provide proper information or updates in a timely manner

## Customers Affected



concerning the restoration timeframes, leaving both JCP&L's customers and the Board in the dark, both literally and figuratively. Lack of fluid situational analysis and accurate restoration advice impedes the capability of emergency management officials to take steps necessary to protect the community and execute emergency obligations regarding critical care, sheltering, evacuation and a whole variety of functions.

Verizon also failed to properly apprise Staff of problems with its wireline service in the area. Staff only became aware of the wireline service problems from customer complaints received after the power was fully restored.

### **C. Investigation and Analysis**

BPU President Jeanne Fox directed Board Staff to conduct an investigation of JCP&L's communication and restoration actions taken during and after the July 5th outages. As part of that investigation, Board Staff from the Division of Reliability and Security (Division Staff) scrutinized the emergency management aspects of the event including emergency communications, public communications and the utility's assessment of the magnitude and impact on the affected communities.

Unlike weather events, JCP&L was not dealing with numerous trouble locations, weather-related infrastructure damage, or the difficulties associated with multiple trouble location assessments and widespread crew mobilization management. The Company only had to deal with a limited number of trouble locations, spread out over a long period of time. Therefore, we

believe that JCP&L should have been able to provide significantly better situational analysis, including worst-case impact scenarios and realistic restoration timelines.

Division Staff's investigation identified areas of concern and shortcomings related to JCP&L's emergency communications and situational analysis capabilities with the Board, as well as with local and county governments, as the event occurred.

Division Staff has also investigated Verizon's actions during this period.

## **II. JCP&L's Emergency Management/Communications**

### **A. Emergency Communications and Impact**

Division Staff initially called JCP&L about this event at approximately 1:30 P.M. on Saturday, July 5<sup>th</sup>, after a Staff member was notified by a private citizen of an outage in the area. It was not until 2:30 p.m. on July 5<sup>th</sup> that JCP&L advised Division Staff that the outages were the result of a fault in the V-126 submarine transmission line feeding the island of Seaside Heights and surrounding areas. It took JCP&L over an hour and a half to convey a preliminary determination of the scope of the problem to Division Staff. JCP&L provided Division Staff with an update at 3:30 p.m.; however, JCP&L's next definitive update to the Board was not until 10:30 p.m., and this call was not made to a member of the Division of Reliability and Security Director's Office or Emergency Management Bureau Staff, as required.

After the initial failure at 12:50 P.M., the C-203 overhead line in Mantoloking overheated and faulted at 4:20 P.M., and the X-50-3 submarine cable faulted and faulted in a second location at 5:40 p.m. on Saturday, July 5<sup>th</sup>. With the loss of the X-50-3, there was no longer any viable means of getting electricity into the area. Certainly by this point, JCP&L should have recognized the degraded state of its electric distribution and its impact on the community, and should have conveyed this information to Division Staff.

On Saturday July 5<sup>th</sup> at 6:30 p.m., approximately 5 ½ hours after this area began to experience intermittent outages, over 34,000 electric customers were without service across an area that covers a large portion of the barrier island. At a minimum, 5,000 customers had been out of service for over six hours. N.J.A.C. 14:3-3.9 requires JCP&L to notify the Board by the most expedient means of communication available when 5,000 customers are interrupted for at least two hours; yet, it was nearly 5 ½ hours (10:30 P.M.) after the two hour criteria was reached when JCP&L again made substantive contact with Board Staff.

As the evening progressed, traffic on the island and in the surrounding area was hopelessly gridlocked. Restaurants were forced to close while they tried, largely unsuccessfully, to salvage expensive food inventories. Those who were stranded on amusement rides had been rescued, but the community overall was left hanging without sufficient information from JCP&L about the recovery effort status and anticipated duration of the outage. JCP&L's lack of communication also restricted the Board's ability to execute its emergency management obligations. As electric power demand declined Saturday night, and with the restoration of the C-203 circuit at 9 P.M., the Company was able to restore all affected customers on the repaired lines.

Then, on Sunday, July 6<sup>th</sup>, JCP&L experienced three new, separate faults at Mantoloking and Lavallette. Beginning at 11:50 A.M., two of these faults were in the overhead portion of the X-50-3 submarine transmission line and one was in the V-126 submarine line. JCP&L documents indicate that the Company contacted the Board's Division of Customer Assistance Staff (instead of the Division of Reliability & Security) only twice during the day), although there were three faults. The actual times of the contacts were not logged by JCP&L. The faults cut off electric service to: #1) over 25,000; #2) 8,000; and, #3) 22,000 customers at peak, respectively. The faults which affected 25,000 and 22,000 customers were also reportable by N.J.A.C. requirements, since 5,000 customers were out of service for over two hours in each of the two incidents. Although the number of customers affected was large, it was the even larger community impact over the entire area that is the real story from an emergency management perspective.

In summary, on Sunday, July 6<sup>th</sup>, there continued to be shortcomings in JCP&L's efforts to fulfill its obligations to communicate with the Board's Division of Reliability and Security Staff. In light of the sensitivity of the area and the events of the Saturday evening, JCP&L should have kept Division Staff much better informed of the additional outage events as they transpired. As demand declined again overnight on Sunday, and with the restoration of the overhead portion of the X-50-3 transmission line, the Company was able to restore all affected customers.

JCP&L gave Division Staff a status report at 8:50 a.m. on Monday July 7<sup>th</sup>, indicating that all customers had been restored after the outages of the previous evening. Then, at 4 p.m., the V-126 submarine transmission line faulted for the third time, affecting approximately 9,000 customers. Division Staff was finally notified of the additional fault in a timelier manner, by 4:45 p.m. However, in recognition of the sensitivity of the area and the major outage events of the past two evenings, Board Staff would have expected more prompt notice. This slightly improved notification timeline was likely due in part to discussions between Staff and JCP&L earlier in the day about the Company's lack of fluid communications over the weekend.

JCP&L provided a listing of the contacts that the Company made with municipal and county officials during the period. The Company documented contacts with Berkeley Township, Seaside Heights, Seaside Park, Lavallette, and Dover Township as well as Ocean County. Police Departments for Berkeley Township, Seaside Heights, Lavallette, Seaside Park, Dover Township and Ocean County were included on the contact list. Throughout the series of events, the Ocean County Office of Emergency Management (OEM) Emergency Operations Center (EOC) did not open. Had the Company appropriately executed its emergency communication obligations with Division Staff, the Board would have recommended that the Ocean County EOC be opened. JCP&L records indicate that the Company did not contact the Ocean County OEM until after 5 p.m. on both Saturday, July 5<sup>th</sup> and Sunday, July 6<sup>th</sup>, even though the Company had upwards of 25,000 people out of service in the early afternoon.

On Wednesday, July 30, 2003, the Board hosted a meeting with County and Local public safety and emergency management officials to discuss JCP&L's emergency communications during the July 5<sup>th</sup> through July 8<sup>th</sup> period. Attendees at the meeting included representatives from JCP&L, Dover Township, Lavallette Borough, New Jersey State Police and the Ocean County OEM. As Staff had discerned from its own experience, the feedback from the attendees confirmed that JCP&L had communications problems. Division Staff again confirmed this to

be true during a Tabletop exercise held February 11<sup>th</sup>, 2004 at the Board's offices to recreate the communications over the course of the 2003 July 4<sup>th</sup> holiday weekend outages. The Tabletop re-creation indicated that communication problems appeared to have largely been due to an information relay gap between the Morristown Regional Dispatch Office (RDO) and the area managers regarding situation assessment accuracy and outage duration estimates. It is Staff's opinion that the Company recognizes this problem as well.

During the Tabletop, JCP&L discussed its plan to move its dispatch center from Morristown to the Central Region so that it could be closer to the shore area. JCP&L has since set up a new dispatch center in Middletown for the Central region.

The scenario for the Tabletop followed the step by step sequence of problems experienced in the field during the July 5<sup>th</sup> – 8<sup>th</sup> timeframe in order to explore JCP&L's response regarding situational analysis and emergency communications. Each event was followed by an analysis of JCP&L's actions or lack thereof.

During the Tabletop, it became apparent that a JCP&L dispatcher situated in the RDO in Morristown does not have as one of his/her top priorities the communication of situational analysis to JCP&L area managers or regulatory affairs personnel, who would then be able to relay the information to local municipalities and the appropriate Board Staff. Rather, the dispatcher's main focus and top priority is the timely restoration of electric service to customers. Therefore, area managers or regulatory affairs personnel may be delayed in getting the needed information, which in turn conflicts with Division Staff's stated goals of getting available information out to the emergency management community as quickly as possible. A number of Staff's Recommendations are designed to address this problem by having the utility shorten its notification timeframes, institute more of an incident command structure and reinforce communications protocols.

At the end of the Tabletop, JCP&L provided a copy of its internal "Lessons Learned" review to Staff for the July 5<sup>th</sup> through July 8<sup>th</sup> timeframe. JCP&L's "Lessons Learned" identified many of the issues that were similarly brought out in the Tabletop Exercise event re-creation.

Subsequent to the Tabletop, Division Staff visited JCP&L's new Central Region Dispatch center in Middletown, met with company officials, and reviewed the emergency management and communications procedures that are now in place for dispatchers, managers, communications liaisons and rates and regulatory personnel. JCP&L officials provided an operational overview and detailed the training that dispatch personnel undergo and how they have reinforced the need for timely, accurate communications and information. JCP&L stated that it has addressed and strengthened those parts of the process which did not function properly during this event.

While Division Staff has seen the changes on paper, Staff still believes that the Board should direct actions to be taken, recognizing that JCP&L has taken steps which are yet untested in a major event.

Division Staff has developed specific recommendations to help correct the deficiencies that were identified from the Tabletop and JCP&L's "Lessons Learned" review. Division Staff's Conclusions and Recommendations from these reviews are included with those listed below.

## **B. Analysis and Conclusions**

Division Staff concludes that there were problems with JCP&L's emergency management communications with the Board during the actual event, and that there were also shortcomings in the structure in place and/or operating to effectively manage the Company's emergency communications and to provide for initial and continuous situational analysis about the outage impact. Further, Staff concludes that the shortcomings in JCP&L's emergency communications to appropriate Division Staff eroded Staff's capability to meet its emergency management obligations.

It was unclear during this event, and at the time of the Tabletop, who at JCP&L was in charge of managing the overall emergency response to the event. The response to any emergency requires quick assessment, problem discernment, clear response objectives, and effective internal as well as external communications. Partly due to the lack of monitoring devices in the electrical transmission system in this area, a clear discernment of the situation was not possible. This, in turn, contributed to an inaccurate assessment of the situation. The absence of a clear incident command structure, with the express mission of ensuring that emergency management protocols and communications were functioning, was apparent. Internal and external communications breakdowns from the start caused subsequent communication problems. Whatever system JCP&L had in place to manage emergency communications and protocols clearly did not work effectively. As can be seen from this event, an outage can quickly become a serious and debilitating community event.

JCP&L must reconstruct its existing emergency communications management structure. Accordingly, JCP&L must develop the capacity for robust and fluid communications with Division Staff and the emergency management community. Staff's recommendations seek to move the Company to recognize that while service restoration and recovery are its primary responsibility, there is the secondary, but equally important obligation of conducting situational analysis and communicating effectively so that emergency management sectors can perform their obligations to assist the community at large.

Division Staff also concludes that JCP&L's internal procedures for making statutorily required notifications to the Board were not followed, on more than one occasion, when customer outage levels met the reporting criteria delineated in N.J.A.C. 14:3-3.9.

## **C. Recommendations**

There is a command structure in New Jersey that requires Division Staff to work through the State Office of Emergency Management (OEM), and flow information through and down the county and local emergency management structure to the impacted communities. Several of Staff's Recommendations target the Company's need to improve its capabilities in both situational analysis and emergency communications.

1. JCP&L shall, within 30 days, establish or designate a person or persons with full and complete responsibility and authority to execute the Company's emergency management obligations during outages which materially affect community functioning. This position shall be provided with the training, authority and capability to direct the Company's emergency communication obligations described in the utility's internal procedures.



2. Independent of the reporting requirements under N.J.A.C. 14:3-3.9, JCP&L shall participate in a program to promote more timely communications by using its reasonable best efforts to report to the Division any outage that affects over 2,500 customers for at least one hour (“Pilot Program”).
  - A. This notification, which will take place within one hour of an outage, will include the steps planned to restore service within the shortest timeframe and address any related emergencies which will, or may, cause significant impacts to communities within the Company’s service territory as a result of the outage.
  - B. In addition, in connection with such notification, JCP&L shall report the number of customers affected, the area affected, the estimated restoration time, and whether any hospitals, or to the extent known, any police, fire, schools or major transportation hubs, are affected. JCP&L will also communicate to Division Staff the potential for the subject outage expanding and having a significant community impact. JCP&L shall periodically provide updated information about the above factors with respect to such outage until restoration efforts have been substantially completed.
  - C. The Pilot Program will be in effect for one year upon adoption of this MOU by the Board. The Division may extend the Pilot Program for up to one year at the conclusion of the one-year period. The Division and Company shall work in good faith and may modify the Pilot Program by mutual agreement.
3. Independent of the reporting requirements under N.J.A.C. 14:3-3.9, JCP&L shall notify Division of Reliability and Security Staff within 30 minutes any time that any of the transmission lines (including subtransmission lines) feeding the area in and around Seaside Heights, Lavallette, Mantoloking or Seaside Park fails or is taken out of service for longer than 15 minutes, even if this condition does not lead to any customer outages. Additionally, the notice shall identify the potential of the occurrence to be repeated or further impact the distribution system. JCP&L shall have this notification system in place within 10 calendar days from the Board’s approval of this MOU. This requirement shall be in effect for one year from the date of the Board’s approval of the MOU.
4. The Company shall continue to train its dispatchers, dispatch managers, communications liaisons and regulatory affairs personnel in order to build a more effective capacity to achieve expedient outage assessment, trigger prompt emergency communications and provide continuous situational analysis. The Company has submitted a written protocol of its emergency communications procedures.

### **III. Telecommunications**

#### **A. Verizon Wireline Telecommunications**

The power outages that occurred July 5-8, 2003 also affected the Seaside Heights and Toms River area customers' wireline and wireless telephone service. Wireline telephone service for the area is partially powered by JCP&L through Verizon's controlled environmental vaults (CEVs). The CEVs are typically large underground enclosures that house wireline telephone loop equipment, as well as both the commercial and battery backup power supplies.

During the July 2003 outages, the loss of commercial power affected seven of the CEVs in the area. Loss of commercial power to a CEV triggers an alarm at the CEV's host Central Office to notify Verizon of the situation. All seven of the battery backup systems switched to their secondary power source without incident; however, Verizon was not clear if they received an alarm from each of the seven affected CEVs upon loss of commercial power. Verizon's battery backup system will typically provide power for four to six hours depending upon usage. The duration of the July 2003 power outages exceeded the capacity of the battery backup in two of Verizon's CEVs, and this subsequently caused phone service to be interrupted. The two CEVs that lost power serve the east area of Dover Township and are located on Adams Avenue between Lloyd and George Road, and at the intersection of Route 37 and Vaughn Avenue in Dover Township. The Adams Avenue CEV serves approximately 3,800 customers, while the Route 37 CEV services approximately 2,100 customers.

Verizon has an emergency power plan to provide portable truck mounted generators in case of a prolonged outage such as this event. However, Verizon did not provide any evidence that technicians with portable generators were dispatched to any of the affected CEVs. In this event, there were only seven CEVs that lost commercial power. At a minimum, Division Staff concludes that Verizon should have staffed one crew and one portable generator at each affected CEV.

Division Staff also concludes that because Verizon did not provide appropriate service to its customers, Staff is recommending the addition of the following mandatory protocols to the Wireline Best Practices:

- 1) Wireline companies shall, in the case of a power outage at a CEV or any other electric power dependent facility remote from the Central Office, provide portable generators to each affected device within one hour of loss of commercial power.
- 2) Wireline companies shall install in each CEV or any other electric power dependent facility remote from the Central Office remote monitoring devices to notify the utility of:  
a) loss of commercial power; and, b) low battery backup power.
- 3) Wireline companies shall install emergency batteries capable of maintaining the normal operation of the facility for 24 hours at each CEV or any other electric power dependent facilities remote from the Central Office.

In response to the problems of the July 2003 outages, Verizon has already made some strides toward rectifying the situation. Verizon started a battery replacement effort in 2003 by

replacing 1700 battery cells in 13 locations in the Toms River area. As of January 2004, the initiative was 90% complete, with the final completion projected by the end of the first quarter in 2004.

## **B. Verizon Wireless Telecommunications**

Verizon Wireless customers also experienced problems using their cellular phones during the outages. Customers located in the Borough of Lavallette were serviced by a cellular tower that was entirely dependent upon commercial power. This problem was brought to the attention of Verizon Wireless after the July 2003 outages by concerned customers. Verizon Wireless has indicated to Staff that the Company intends to take action immediately to provide redundancy for the cellular tower. Division Staff plans to address this issue of battery backup and redundancy by adding mandatory protocols into the next version of the Wireless Best Practices.

## **C. Recommendations**

1. Division Staff shall work with the Wireline Telecommunications Sector of the IAC to the Task Force to develop protocols for the Wireline Best Practices that address the following:
  - i. Wireline companies shall, in the case of a power outage at a CEV or any other electric power dependent facility remote from the Central Office, provide portable generators within one hour of loss of commercial power.
  - ii. Wireline companies shall install in each CEV or any other electric power dependent facility remote from the Central Office remote monitoring devices to notify the company of a) loss of commercial power and b) low battery backup power.
  - iii. Wireline companies shall install emergency batteries capable of maintaining the normal operation of the facility for 24 hours at each CEV or any other electric power dependent facilities that are remote from the Central Office.
2. Division Staff shall, in conjunction with the Wireless Telecommunications Sector of the IAC to the Task Force, add the following protocol to the Wireless Best Practices.
  - i. Wireless companies shall install, to the extent possible, at each cell phone tower, battery back-up power and the capability to hook up a portable generator in the event of a loss of commercial power.

# **IV. Public Relations – Division of Customer Assistance Analysis**

## **A. Customer Call Center Activity**

JCP&L maintained personnel at the customer call centers on a 24-hour basis during the July 4-8, 2003, outages occurring in Seaside. As previously reported by the Company in the August 2, 2002 report, there have been upgrades to its toll-free outage reporting hotline. As a result of the upgrades, during the outage, customers calling the hotline to report an outage

heard an estimated restoration time for their affected circuit. However, in the case of major outage events, customers would be provided with a regional estimated restoration time.

The Company received 1,302 calls on July 4. However, the Call Center began experiencing an increase in calls on July 5, receiving 7,202 calls. Staffing was increased from 20 on July 4 to 46 on July 5. In response, the Company used its internal voice response unit to assist the customer service center representatives in gathering outage information and providing customers with restoration updates. 21<sup>st</sup> Century, an outside vendor utilized by JCP&L during situations resulting in heavy call volumes, also handled calls. Again, due to the new call tracking capability of the Call Center telephone system, the Company was able to provide a breakdown of the emergency 911 calls received July 4 thru July 8, which totaled 214.

As required in the Board's Order, EX99100763 and the March 1999 Storm Report, the Company has made significant upgrades to its telephone system, enabling customers to receive information regarding the Company's service restoration efforts and an approximate time for their particular circuit to return to service. In addition, customers were able to reach the Call Center and reach a live operator, the IVR or the 21<sup>st</sup> Century answering service waiting no longer than 47 seconds on Tuesday, July 5 when calls peaked at 7,202.

## **B. Customer Complaints and Media Utilization**

The Board received 265 service disruption complaints from customers throughout the July 4-8 outage.

The Company reported that as soon as information was available, it was provided to media, government agencies and customers, as provided in its Communications Plan. There was extensive communications between Operations management and Regional personnel. Contacts were made with the media, the Board, legislative officials, as well as county and municipal officials.

Again, as required in the Board's Orders, EX98101130, EX99100763 and the March 1999 Storm Report, JCP&L proactively implemented its communication plan during the event making contact with required entities. The Board was contacted with updates three times on July 5, two times on July 6 and three times on July 7. Additionally, the Central Region President spoke with Board representatives at various times through the event. Legislative offices in the 10<sup>th</sup> and 11<sup>th</sup> districts were contacted and provided information. Immediately after the event, the Region President met with these legislators in their offices, as well as numerous other local and county officials.

As reported by the Company, there were no press releases issued by the Company due to the nature of the outage, which involved episodic and quickly changing occurrences.

### **C. Claims**

The Company advised the Board by copy of correspondence dated July 15, 2003 of the implementation of a Claims Resolution Program. Pursuant to the program, customers were permitted to file claims by regular mail, by phone, by email through the internet at the JCP&L website. Customers were also able to file claims in person at the Company's temporary claims office which opened on July 28, 2003, located at the Seaside Park Borough Hall. The Company closed its temporary claims office on September 5, 2003. A notice was placed in the Asbury Park Press and Ocean County Observer advising potential claimants of the claims process.

Under the general procedures of the program, upon receipt of the claim, the Company would attempt to contact the claimant within 48 hours to continue the claims resolution process. Justified claims would be paid in a fair, reasonable and prompt manner. Municipalities and political subdivisions were included in the program and are to be contacted directly by a JCP&L representative. To insure that claims were valid and legitimate, the Company required proof of loss, with appropriate substantiating documentation (primarily for business claims), or, for most residential claims, JCP&L used certain guidelines or criteria, as necessary and appropriate. Claimants were required to sign a simple one-page release to protect JCP&L from future legal action by the claimants. Claims were paid for actual property damage and financial loss.

The following chart sets forth the number of claims processed by the Company as of February 7, 2004:

	<b>Residential Business/Commercial</b>	<b>Loss of Business</b>	<b>Totals</b>
<b>Number of Claims</b>	<b>2245</b>	<b>242</b>	<b>2487</b>
<b>Claims Settled</b>	<b>2163</b>	<b>189</b>	<b>2352</b>
<b>Claims Paid</b>	<b>1959</b>	<b>145</b>	<b>2104</b>
<b>Dollars Paid</b>	<b>\$505,883.95</b>	<b>\$1,404,304.38</b>	<b>\$1,907,188.33</b>

### **D. Water and Ice Distribution**

As reported by Company's senior regulatory affairs analyst, JCP&L did not implement its plan to distribute ice, dry ice and water to its customers with wells, stating that the event did not meet the criteria set forth in the Board's Orders in this area.

### **E. Critical Care Customers**

JCP&L did not implement the plans associated with contacting critical care customers, stating that the event did not meet the criteria set forth in the Board's Orders.

## **V. Board Staff's Recommendations**

Board Staff recommends that a Memorandum of Understanding (MOU) be entered into with JCP&L to implement the Recommendations contained within this Report, and that the Board issue an Order adopting the MOU.

In the Matter of the Board's Investigation Into  
Jersey Central Power & Light's Outages  
of the July 4, 2003 Weekend

DOCKET NO. EX03070503  
EO04050373

**Memorandum of Understanding**

- Whereas**, the New Jersey Board of Public Utilities ("Board" or "BPU"), in its Order dated July 16, 2003 (the "July 16 Order"), in the above-referenced BPU Docket, initiated an investigation into the causes of the outages that occurred on the Jersey Central Power & Light Company ("JCP&L" or the "Company") electric system over the July 5-8, 2003 period at the Barrier Peninsula; and
- Whereas**, the Division of Reliability and Security (the "Division"), conducted an investigation which resulted in the preparation and issuance of a Report on the Emergency Management Aspects of the Seaside Heights/Toms River July 5-8 event, dated June 1, 2004 ("Report"); and
- Whereas**, the July 5, 2003 outage incident affected the towns of Seaside Heights, Seaside Park, Mantoloking, Ocean Beach, Ortley Beach and Lavallette, and lasted 63 hours intermittently into Monday, July 7, 2003, affecting more than 34,000 customers; and
- Whereas**, the Board had adopted by its Order dated March 29, 2004 a Memorandum of Understanding between the Division of Energy and JCP&L in docket numbers EX03070503 & EX02120950 to address JCP&L's reliability-related operations and system design issues; and
- Whereas**, there is no prior Memorandum of Understanding ("MOU") between the Division and JCP&L addressing the emergency management and communications issues surrounding the July 4<sup>th</sup> outages; and
- Whereas** a need exists for the Company to implement Staff's recommendations resulting from Staff's investigation.

Now therefore, the parties hereto agree as follows:

1. JCP&L shall, within 30 days, establish or designate a person or persons with full and complete responsibility and authority to execute the Company's emergency management obligations during outages which materially affect community functioning. This position shall be provided with the training,

authority and capability to direct the Company's emergency communication obligations described in the utility's internal procedures.

JCP&L represents that its outage management process embodies the Incident Command System ("ICS") conceptually and in outcome. All of the elements of command, control and communications protocols are provided for in the Company's outage management process and the process is scalable from small to large incidents as is necessary. JCP&L also represents that its current internal emergency communications plan and procedures provide for direct communication by appropriate JCP&L personnel with appropriate Division Staff and other emergency management officials during times of an emergency.

2. Independent of the reporting requirements under N.J.A.C. 14:3-3.9, JCP&L shall participate in a program to promote more timely communications by using its reasonable best efforts to report to the Division any outage that affects over 2,500 customers or where a municipal utility is affected by a JCP&L outage condition for at least one hour ("Pilot Program").
  - A. This notification, which will take place within one hour of an outage, will include the steps planned to restore service within the shortest timeframe and address any related emergencies which will, or may, cause significant impacts to communities within the Company's service territory as a result of the outage.
  - B. In addition, in connection with such notification, JCP&L shall report the number of customers affected, the area affected, the estimated restoration time, and whether any hospitals, or to the extent known, any police, fire, schools or major transportation hubs, are affected. JCP&L will also communicate to Division Staff the potential for the subject outage expanding and having a significant community impact. JCP&L shall periodically provide updated information about the above factors with respect to such outage until restoration efforts have been substantially completed.
  - C. The Pilot Program will be in effect for one year upon adoption of this MOU by the Board. The Division may extend the Pilot Program for up to one year at the conclusion of the one-year period. The Division and Company shall work in good faith and may modify the Pilot Program by mutual agreement.
3. Independent of the reporting requirements under N.J.A.C. 14:3-3.9, JCP&L shall notify Division of Reliability and Security Staff within 30 minutes any time that any of the transmission lines (including subtransmission lines) feeding the area in and around Seaside Heights, Lavallette, Mantoloking or Seaside Park fails or is taken out of service for longer than 15 minutes, even if this condition does not lead to any customer outages. Additionally, the notice shall identify the potential of the occurrence to be repeated or further impact the distribution

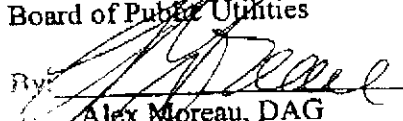


system. JCP&L shall have this notification system in place within 10 calendar days from the Board's approval of this MOU. This requirement shall be in effect for one year from the date of the Board's approval of the MOU.

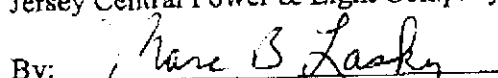
4. The Company shall continue to train its dispatchers, dispatch managers, communications liaisons and regulatory affairs personnel in order to build a more effective capacity to achieve expedient outage assessment, trigger prompt emergency communications and provide continuous situational analysis. The Company has submitted a written protocol of its emergency communications procedures.
5. It is understood that this MOU arises in connection with Reliability and Security Staff's investigation into the emergency management and communication aspects of the July 4, 2003 weekend outages conducted under this specific docketed proceeding and addresses actions that may be of value to improve consequence management for the future. As such, the execution by the Division Staff and JCP&L, approval by the Board, and implementation by JCP&L of this MOU resolve all issues associated with the Report in their entirety, but this MOU is not intended to replace or satisfy any previously issued Board Order or the interim or final recommendations of the Special Reliability Master ("SRM") referred to in the Boards' Order of December 22, 2003 in BPU Docket No. EX03070503, which adopted the recommendations contained in the SRM's Interim Report.

This MOU may be executed in as many counterparts as there are signatures of this MOU, each of which counterparts shall be an original, but all of which shall constitute one and the same instrument.

Peter C. Harvey  
Attorney General of the State of New Jersey  
Attorney for Staff of the New Jersey  
Board of Public Utilities

By:   
Alex Moreau, DAG

Jersey Central Power & Light Company

By:   
Marc B. Lasky, Esq.  
Thelen Reid & Priest LLP

Dated: June 7, 2004